

Summer Wildlife Inquiry 2005

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Abstract

Surveys of nine species of summer wildlife made by rural residents in the five DNR administrative regions of the state of Wisconsin were compiled for 2005. On a statewide basis for the year of 2005, sightings have increased for one of the nine species, the wild turkey. Sightings of wild turkeys have increased consistently on a statewide basis during the long-term survey period of 1988-2005. Eight species; bobwhite quail, coyote, fox, gray partridge, ring-necked pheasant, ruffed grouse, skunk, and white-tailed deer decreased statewide but the decrease was not significant. In addition to statewide data, sightings are also tabulated for each of the five DNR administrative regions. Changes in reporting rates for the nine species were tested with χ^2 analysis. Analysis of variance was used to test for differences among years and regions for two species.

Methods

Originally, names and addresses for this survey were chosen from a master list compiled in the early 1980's with nonrespondents from previous years being systematically culled from the list. The size of the list, however, had become alarmingly small after the 1998 mailing. Consequently, an effort to increase the size of the mailing list was initiated in 1999. Landowners of 40 or more acres were selected from a mailing list from the University of Wisconsin Extension rural landowner list. Names and addresses were randomly drawn in proportion to ownership in each county. Active names from the previous master list were added to this new list, and nonrespondents are annually culled.

Questionnaires were mailed in mid-August 2005 to 5,351 rural residents in the 5 DNR administrative regions in the state. Species reported include bobwhite quail, coyote, fox, gray partridge, ring-necked pheasant, ruffed grouse, skunk, white-tailed deer, and wild turkey. Species data were summarized using the Statistical Analysis System (SAS). Changes in annual (1988-2005) reporting rates of bobwhite quail, coyote, fox, gray partridge, ruffed grouse, skunk, and wild turkey were tested with χ^2 analysis. Analysis of variance was used to test for differences among years and regions in estimated numbers of pheasants and deer on rural properties.

Results

Responses were received from 1,444 rural Wisconsin landowners in 2005, representing a 27% return rate. Overall, during the past 18 years, 25,179 questionnaires have been returned. During 2005, the distribution of responses varied among DNR administrative regions accordingly:

Northern 17%	West Central 26%	Northeast 26%
South Central 20%	Southeast 11%	

Bobwhite Quail

The statewide percentage of farmers that saw or heard bobwhite quail on their property varied significantly during the past 18 years (Fig. 1, $\chi^2 = 138.85$ 17 df, $P < 0.0001$). Bobwhite quail are reported more frequently in the West Central and South Central regions than in the other regions; however, observations have declined 36% in the West Central region, and 52% in the South Central region during the past 18 years.

Coyote

The percentage of respondents reporting coyote sightings changed significantly during 1988-2005 ($\chi^2 = 1,195.75$, 17 df, $P < 0.0001$). On a statewide basis, reported coyote sightings increased annually through 1988-1992, remained stable through 1993-1994, increased again from 1995-2004, and decreased in 2005 (Fig 2). Between 1988 and 2005, coyote sightings have increased 3-to-4 fold in all but the Northern region. In the Northern region, sightings peaked in 1990, gradually decreased from 1991-1995, remained fairly stable from 1996-1998, increased from 1999-2000, decreased in 2001, increased and remained relatively stable from 2002-2005.

Fox

Statewide, the percentage of respondents reporting sightings of fox has been generally decreasing since 2001 (Fig. 3). The percentage of respondents reporting fox sightings varied significantly during 1988-2005 ($\chi^2 = 370.86$, 17 df, $P < 0.0001$). Generally, reported sighting rates increased from 1988 to 1991, decreased during 1992-1997, increased from 1998-2000, and have generally decreased from 2001-2005. The statewide average number of litters reported for farms with foxes has remained relatively constant since 1988, averaging 1.4 fox litters per farm. The average number of litters per farm in 2005 averaged 1.4 as well.

Gray Partridge

Statewide, reported sightings of gray partridge on rural farms have decreased fairly steadily from 23% in 1988 to 8% in 2005 (Fig. 4, $\chi^2 = 362.46$, 17 df, $P < 0.0001$). The decrease in gray partridge sightings has been greatest in the South Central and Southeast region where reported sightings have decreased 87% and 73% respectively during the past 18 years. Gray partridge have generally been reported more frequently in the Northeast and South Central regions than in the other regions.

Ring-necked Pheasant

Landowners were asked to estimate the total number of ring-necked pheasants (adults and young) on their property (Fig. 5). Differences among regional trends in estimated pheasant numbers were significant ($F = 104.22$; 4, 20,928 df; $P = < 0.0001$) with the highest numbers in the South Central region and the lowest numbers in the Northeast region. Pheasant sightings also were different among years ($F = 10.71$; 17, 20,928 df; $P = < 0.0001$).

Ruffed Grouse

Statewide sightings of ruffed grouse by rural residents decreased steadily from 1988 to 1993, remained relatively stable from 1994-97, increased in 1998 and 1999, and have been generally decreasing since 2000 (Fig. 6, $\chi^2 = 179.76$, 17 df, $P < 0.0001$). In 2005, grouse sightings decreased on a statewide level, as well as in all five regions.

Skunk

Statewide, reported skunk sightings during the summer months were generally stable during 1988-95, decreased from 1996 -1997, increased in 1998, were relatively stable from 1999-2002, decreased in 2003, increased in 2004, and decreased by 12% in 2005. (Fig. 7, $\chi^2 = 238.04$, 17 df, $P < 0.0001$). In 2005, skunk observations decreased statewide as well as in all of the DNR administrative regions, except for the southeast region.

White-tailed Deer

Statewide, the percent of rural landowners reporting sightings of deer on their properties has varied significantly between 1988 and 2005 (Fig. 8, $\chi^2 = 38.54$, 17 df, $P = < 0.0021$). The average number of deer observed per property was calculated from those respondents who indicated having deer on their land (Fig. 9). The number of deer observed varied significantly among years ($\bar{E} = 13.52$; 17, 19,100 df; $P < 0.0001$) and among regions ($\bar{E} = 44.49$; 4, 19,100 df; $P < 0.0001$). The number of sightings in the past five years, 2001-2005, is significantly higher than the sightings in the previous five, 1996-2000. Deer sightings were higher in the Northern Region than in the other 4 regions. The interaction of year and region effects was significant ($\bar{E} = 1.6$; 68, 19,100 df; $P = 0.0013$). Mean deer sightings in 2005 decreased 9% on a statewide basis.

Wild Turkey

Statewide, the percentage of respondents reporting sightings of wild turkey on their property increased fairly steadily between 1988 and 2005 (Fig. 10, $\chi^2 = 4,275.43$, 17 df, $P < 0.0001$). Between 1996 and 2001, wild turkey sightings increased in all regions. In 2002 wild turkey sightings increased in the Northern, Northeastern, and South Central regions, and decreased in the West Central and Southeastern regions. From 2003-2005, wild turkey sightings again increased or remained stable in all regions. From 1988-2001, wild turkey sightings were highest in the West Central and South Central regions, in 2002 they were highest in the West Central, South Central, and Northeast regions, from 2003-2005 sightings were highest in the West Central and Northeast regions. Between 1988 and 2005 reported sightings of wild turkeys have increased at least 20-fold in the Northern, Northeast, and Southeast regions.

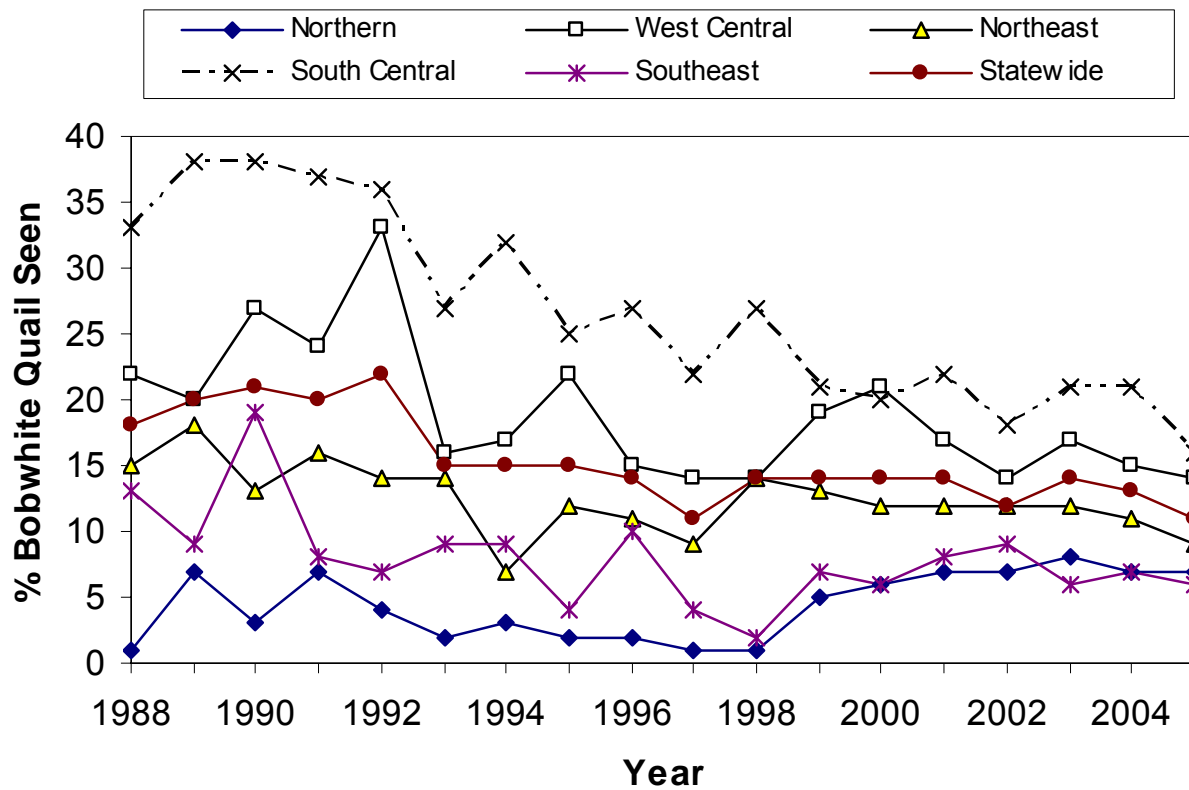


Figure 1. Percentage of respondents seeing or hearing bobwhite quail on their property during the summer months.

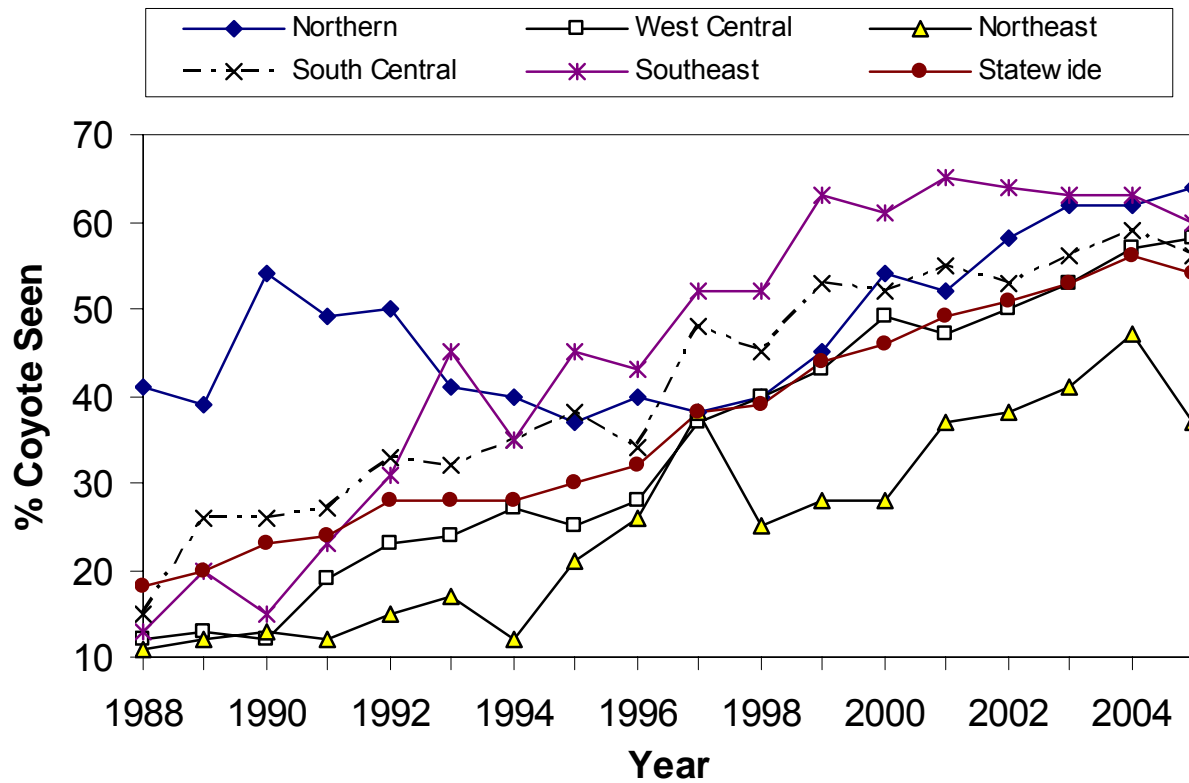


Figure 2. Percentage of respondents seeing coyotes on their property during the summer months.

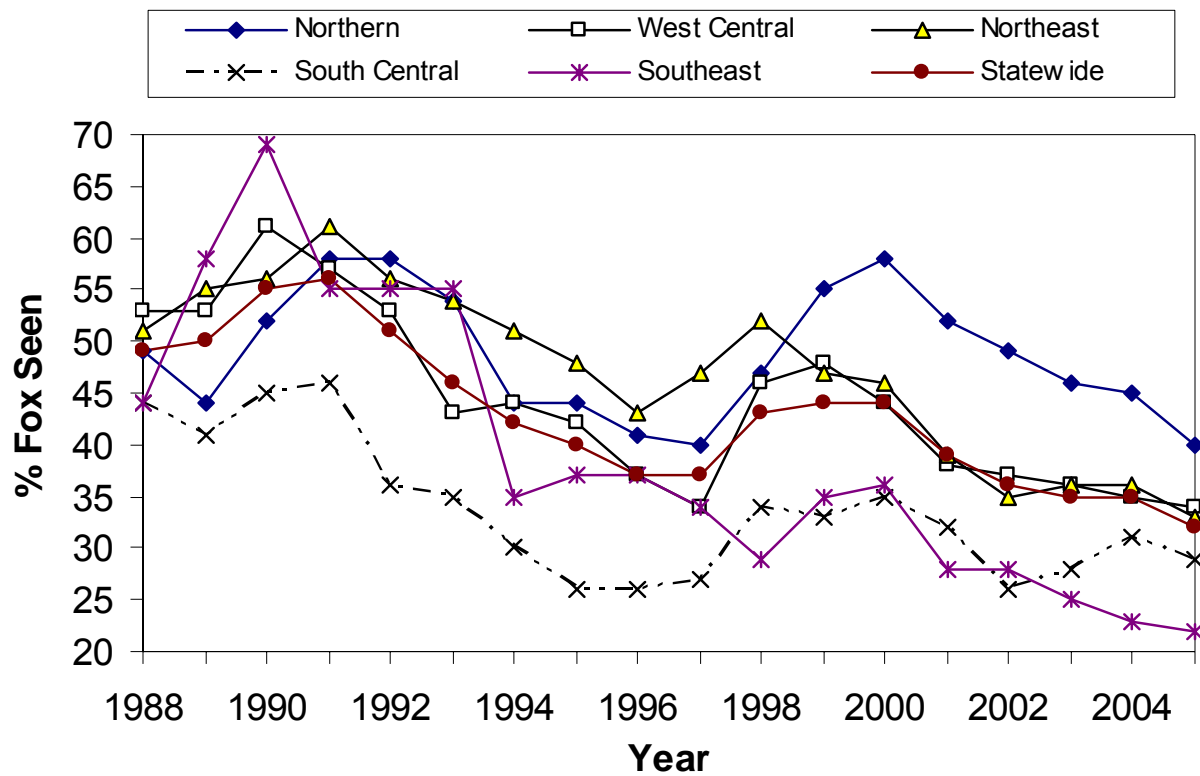


Figure 3. *Percentage of respondents seeing fox on their property since May 1.*

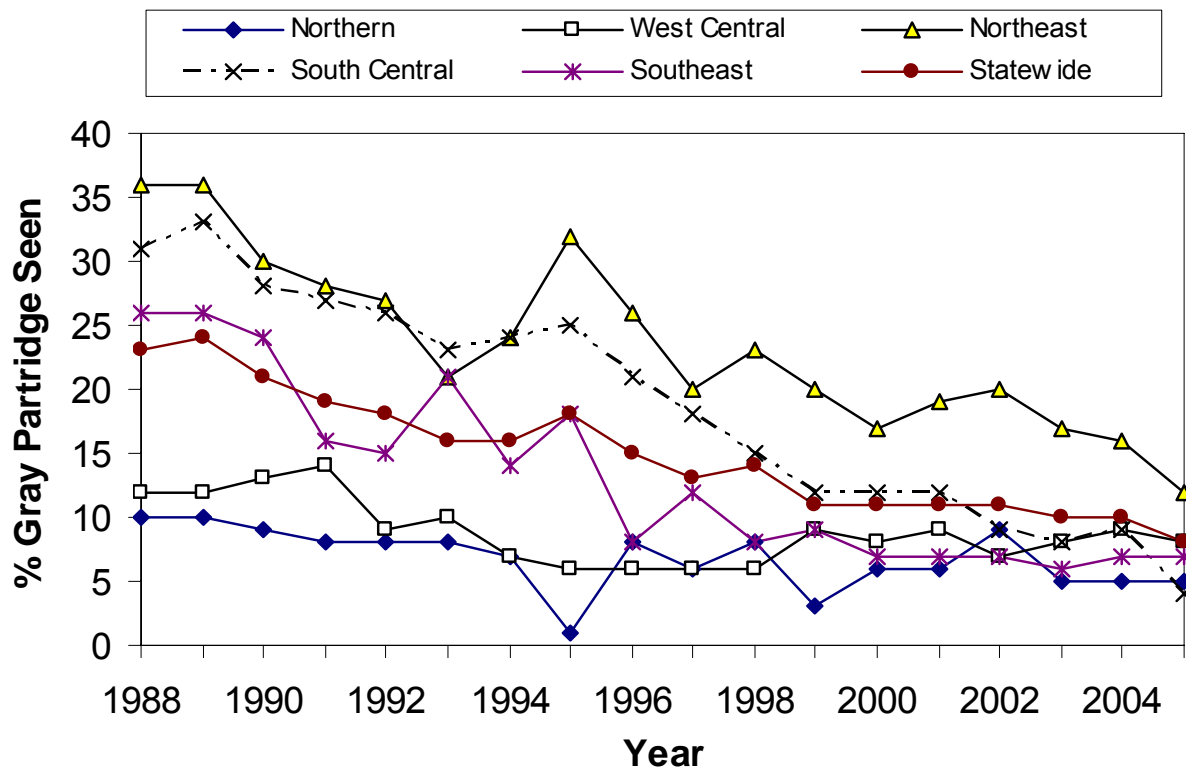


Figure 4. *Percentage of respondents seeing gray partridge on their property since May 1.*

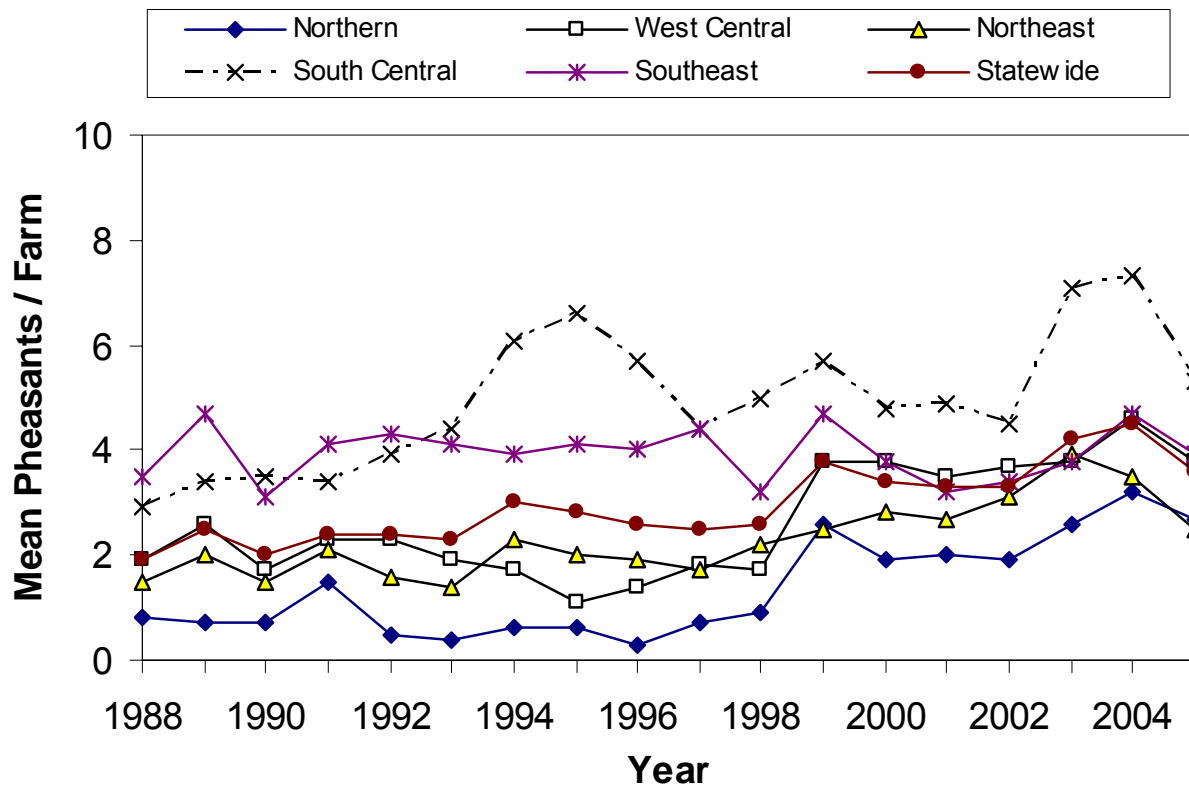


Figure 5. Mean number of ring-necked pheasants (adults and young) estimated to be present on farm, includes farms with no pheasants.

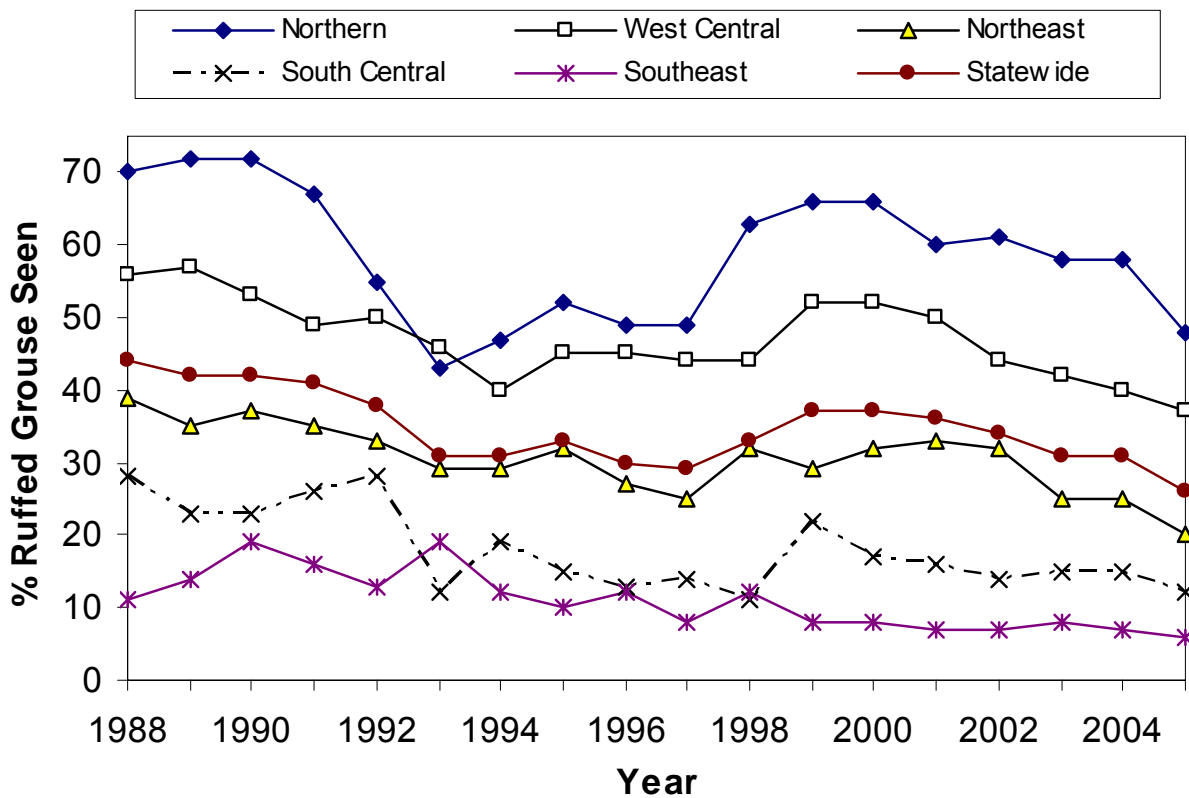


Figure 6. Percentage of respondents seeing ruffed grouse on their property since May 1.

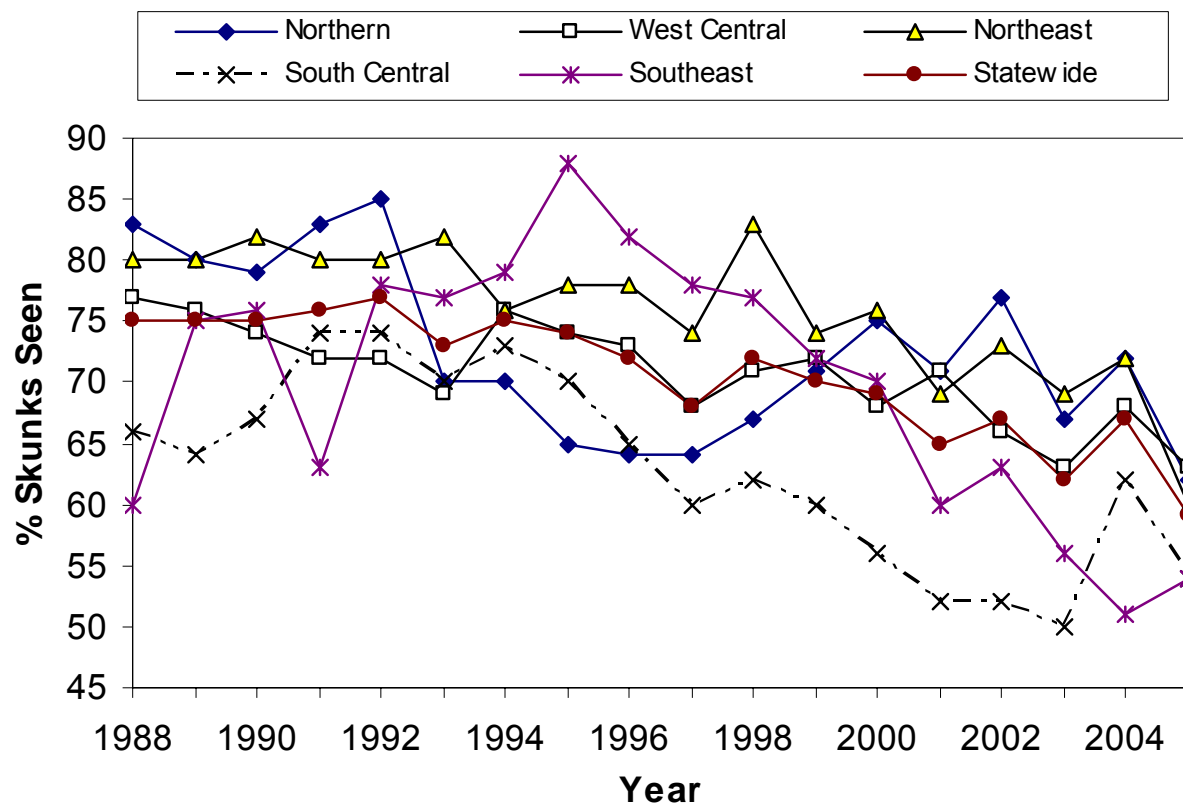


Figure 7. *Percentage of respondents seeing skunks on their property during the year.*

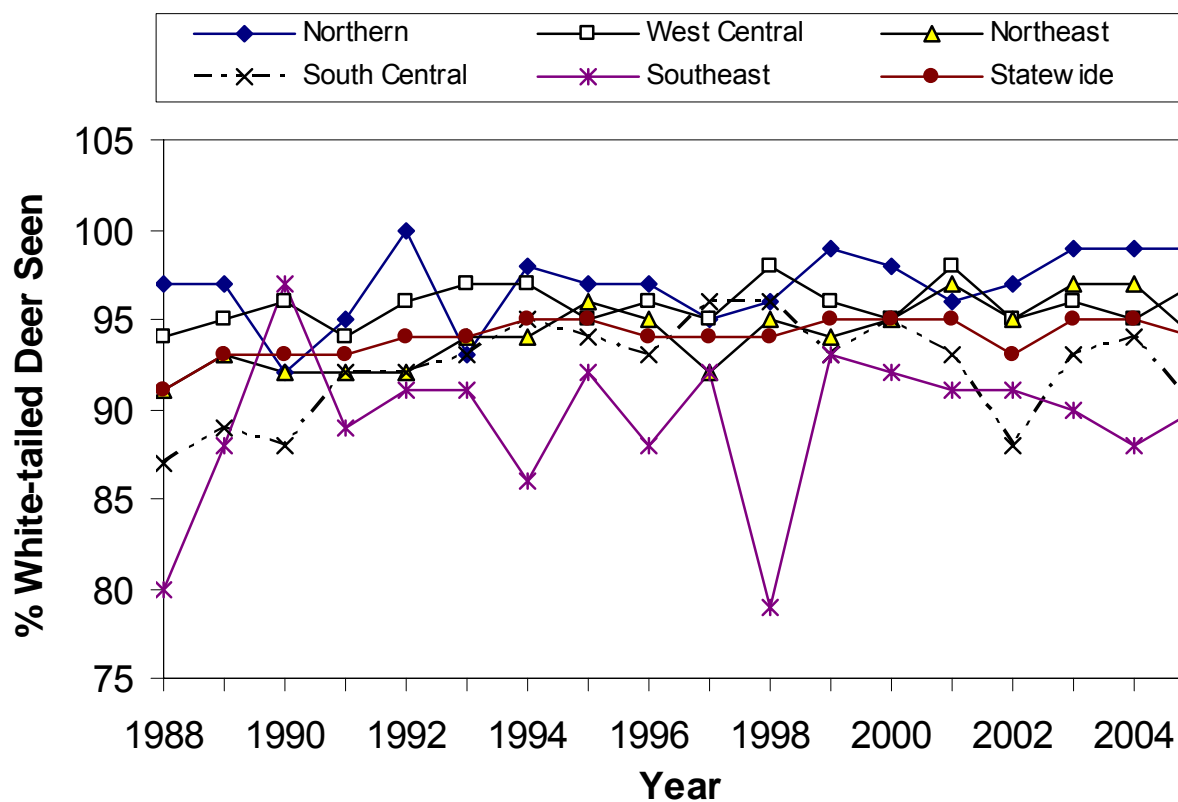


Figure 8. *Percentage of respondents seeing white-tailed deer on their property during the summer.*

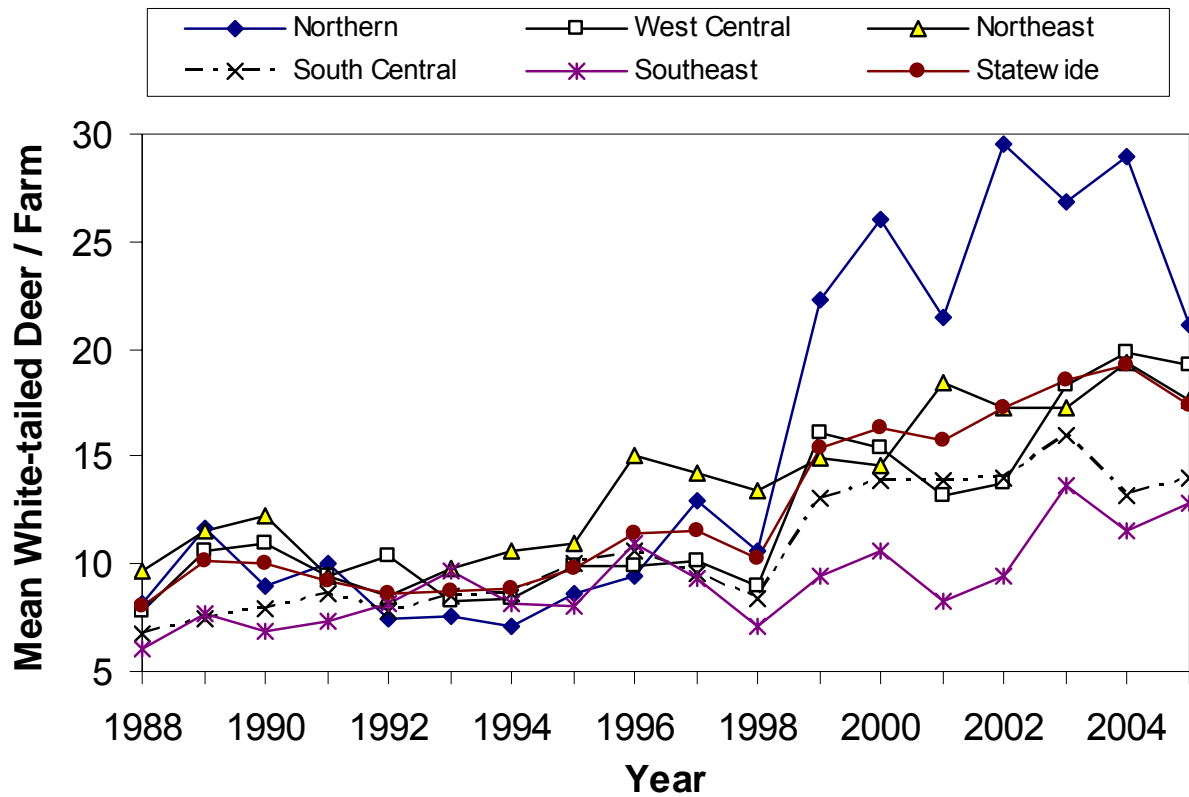


Figure 9. Average number of white-tailed deer seen by respondents on their property during the summer.

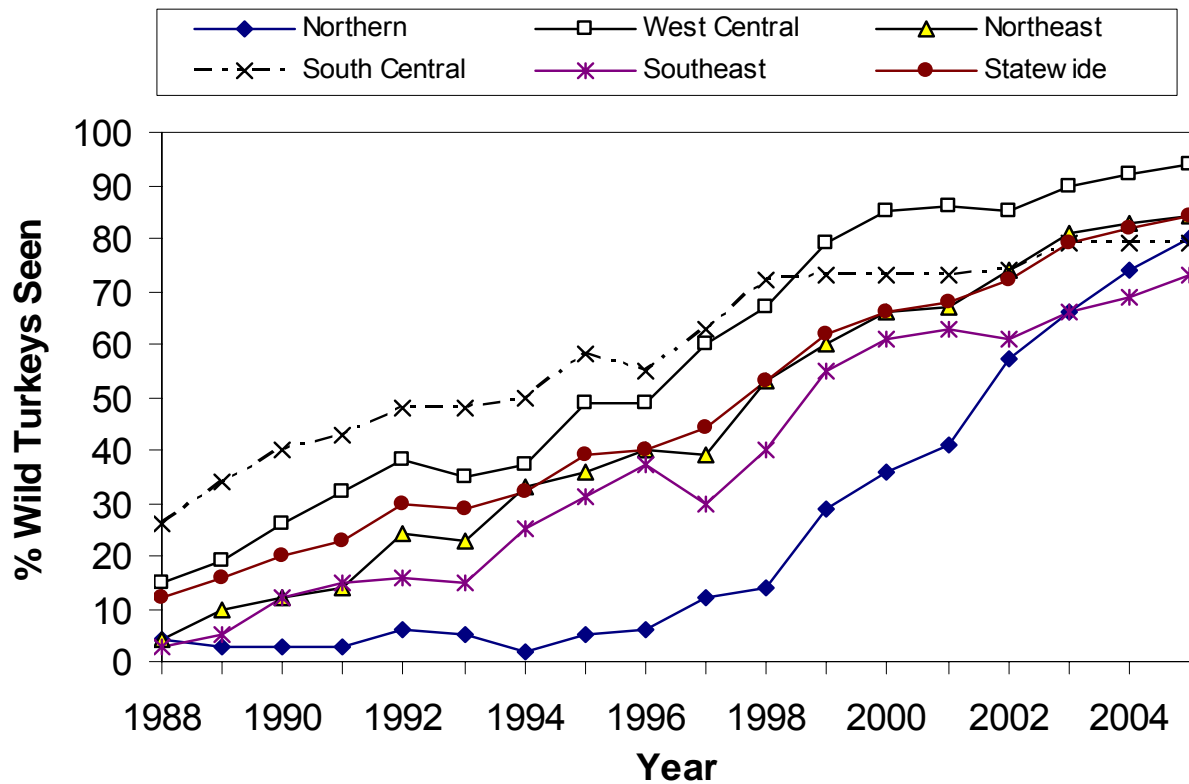


Figure 10. Percentage of respondents seeing turkey on their property since January 1.